

INTUSSUSCEPTION IN A LABRADOR DOG- A CASE REPORT

Kaushal Kumar¹, Pallav Shekhar², P. K. Singh³

Introduction:

Intussusception can occur in any species. In this condition, excessive peristaltic motility forces a segment of the bowel inside the segment just below it, as the smaller tube of telescope slides into the slightly larger tube just ahead of it (Byrne et. al 2005). Although the precise cause remains speculative, however an abnormality in peristalsis due to acute enteritis, surgical trauma and parasitic overload, plays a role for the occurrence of intussusception (Krahwinkel and Rohardson, 1989; The Merck's Veterinary manual 1998). Intussusception may result in luminal obstruction, mucosal congestion, or infarction, depending upon the length of the intussusception and size of the intestinal loops involved. If the disease prolongs, the animal undergoes profound depression and it has been suggested that endotoxemia may become the lethal agent (Jones et. al. 1997). Case History and necropsy lesions

A black colored Labrador (named Jyoti; Reg. No.-00277/09), six and half year old bitch of Dog Squad, Crime Investigation Department (CID), Patna was presented for treatment at teaching clinical complex, Bihar Veterinary College, Patna(OPD Reg. No.-149(D)/09) with the history of persistent vomiting, flatulence, letharginess, anorexia and weight loss. On clinical examination, it was found that the dog was severely anemic therefore; blood transfusion was done after matching and cross matching of blood of donor and

recipient. The dog survived for two months but it remained anorectic and was on fluid and electrolyte therapy. Finally, it was presented in an emergency condition to the clinical complex and died suddenly and sent for post mortem examination to the department of veterinary pathology.

Necropsy revealed the intussusception (Fig.-1) to be swollen and congested with fibrinous adhesion between the invaginated portions of intestine at enteroileal junction. The intestinal lumen for a considerable distance above the obstruction was greatly distended with fluids having inflammatory serous exudates (edema). Below the obstruction the bowel was empty and normal. Intestinal wall were showing lesion of ischemic necrosis and acute enteritis. The gross specimen was collected and preserved for further study.

Result and Discussion:

Intussusception is recognized as a common cause of bowel obstruction in small animals. It has been classified according to their location in the alimentary tract. Gastroesophageal, pylorogastric, enteroenteric, enterocolic and colocolic intussusceptions have been reported in small animal (Lewis and Ellison, 1987). In our case study, necropsy indicated that bitch was suffering from enterocolic intussusception. Since the obstruction involves the ileocolic portion of small intestine, vomiting is the principal sign, and losses of electrolytes constitute a significant clinical problem (Jones et. al, 1997). The formation of intestinal intussusception is proposed to be the result of a lack of homogeneity of the bowel wall. This inhomogeneity may be caused by any abnormality within the bowel wall that alters local intestinal motility or pliability (Applewhite et. al 2002).

Bihar Veterinary College, Patna, Bihar-800014

*(Rajendra Agricultural University, Pusa,
Samastipur, Bihar)*

1= Asstt. Prof. (Vety. Pathology),

2= Asstt. Prof. (Vety. Medicine),

3= Asstt. Prof. (Animal Nutrition)

Intussusception at the enterocolic level appeared to be more at risk of developing adhesion than those with intussusception involving the small intestine alone (enteroenteric) and concurred with the present study.

Gradually developing obstruction may be mitigated by hypertrophy of the local muscularis (Fig.-1), complete obstruction of the intestinal canal has consistent consequences. The portion of the invaginated intestine revealed signs of transmural necrosis, infarction, large hemorrhagic areas, and fibrin deposits on the serous and mucosal surfaces. Intense hyperemia, acute catarrhal enteritis and moderate to severe sero-fibrinous deposits had

section of the bowel and eventually spread to the peritoneum and cause gangrene, the usual outcome of the complete obstruction of the bowel is death after some hours, or in some species, a day or two unless it is surgically relieved. In the present case death was attributed to endotoxic shock (Jones et al 199

References:

1. Applewhite A, Cornell KK and Selcer BA. (2002). Diagnosis and treatment intussusception in dogs. Small animal / exotic compendium (24) 110-124.
2. Byrne AT, Geoghegan T, Govender P, Lyburn ID, Colhoun E, Torreggiani WC. (2005). The imaging of intussusception, Clin. Radiol. (60) 39-46.
3. Davide P, Nicola Marco R, Pietro R, Davide D Z,



Fig.-1. Enterocolic intussusception in Labrador dog -Illustrating the invagination of intestinal segment and hypertrophy of the local muscularis.

affected the portion of small intestine preceding the intussusception (Davide et. al 2009). Although the mesenteric lymph nodes appeared slightly enlarged, neither lymph nodes nor mesenteric fat were involved in the invaginated intestinal portion (Byrne et. al 2005). Hemorrhage into the intestinal tract at the level of the obstruction results in the passage of small quantities of dark blood which may be almost black if the obstruction is high up in the small intestinal tract. These changes are most marked just above (proximal to) the obstruction and gradually decreases in severity with increasing distance proximal from it (Wilson and Burt 1974).

While pathogenic and saprophytic bacteria could conceivably invade and colonize the involved

- Massimiliano S and Angelo GB. (2009). Repeated occurrence of jejunio-jejunal intussusception in a calf. Can. Vet. J. 50(3) 287-290.
- 4. Jones TC, Hunt RD and King NW. (1997). Veterinary Pathology, 6th edn, Willians & wilkins, Maryland. 1078-1080.
- 5. Krahwinkel DJ |4588and Ruchandron DC. (1989). Surgery of the small intestine. In current techniques in small Animal Surgery, 2nd edn, Lea & Febiger, Philadelphia. 63-166.
- 6. Lewis DD and Ellison GW (1987). Intussusception in dog and cat. Compend. Contin. Educ. Pract. Vet. (9) 523-534.
- 7. Radostitis OM, Gay CC, Blood DC and Hinckleff KW. (2000). Veterinary Medicine, 9th edn, W. B. Saunders London 343.
- 8. The Merck Veterinary Manual (1998). 9th edn, Merck & Co., Inc. USA. 214 & 331.
- 9. Wilson GP and Burt JK. (1974). Intussusception in the dog and Cat: a review of 45 cases. J .Am. Vet.Med.Assoc. 164 & 515-519.